

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-6 (canceled)

Claim 7 (original): A method for continuously monitoring road surface friction, comprising the following steps:

- (a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate freely due to movement of said vehicle along said road surface;
- (b) applying an increasing resistance to said test wheel to resist rotation thereof;
- (c) detecting a first instance of slip condition of said test wheel on said road surface;
- (d) generating a signal representative of the braking torque required to produce said incipient slip condition; and
- (e) providing an indication of said slip detection signal.

Claim 8 (original): A method for continuously monitoring road surface friction, comprising the following steps:

- (a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate freely due to movement of said vehicle along said road surface;
- (b) applying an accelerative force to said test wheel to produce slippage thereof;
- (c) detecting a first instance of said slip condition of said test wheel on said road surface;

- (d) generating a slip detection signal at the time of said first instance of a slip condition, said slip detection signal representative of a value of said torque at the first instance of a slip condition; and
- (e) providing an indication of said slip detection signal.

Claim 9 (original): A method for continuously monitoring road surface friction, comprising the following steps:

- (a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate freely due to movement of said vehicle along said road surface;
- (b) applying a variable torque to said test wheel to produce slippage therefor;
- (c) detecting a first instance of slip condition of said test wheel on said road surface;
- (d) generating a slip detection signal at the time of said first instance of a slip condition; and
- (e) providing an indication of said slip detection signal.

Claim 10 (original): A method for repeatedly testing road surface conditions, comprising the following steps:

- (a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate due to movement of said vehicle along said road surface;
- (b) applying a fixed resistance to said test wheel to resist rotation thereof;
- (c) generating a slip detection signal indicative of a slip condition of said test wheel on said road surface; and
- (d) providing an indication of said signal.

Claim 11 (original): A method for repeatedly testing road surface condition, comprising the following steps:

- (a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate due to movement of said vehicle along said road surface;
- (b) applying a plurality of increasing, pre-determined resistances to said test wheel to resist rotation thereof;
- (c) generating a slip detection signal indicative of a slip condition of said test wheel on said road surface for each of said plurality of pre-determined resistances; and
- (d) providing an indication of said signal for each of the said plurality of predetermined resistances.

Claim 12 (original): A method for continuously monitoring road surface friction, comprising the following steps:

- (a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate freely due to movement of said vehicle along said road surface;
- (b) applying an increasing resistance to said test wheel to resist rotation thereof;
- (c) applying an electromagnetically controllable normal force to bias said test wheel against said road surface;
- (d) detecting a first instance of slip condition of said test wheel on said road surface;
- (e) generating a signal representative of the braking torque required to produce said incipient slip condition; and
- (f) providing an indication of said slip detection signal.

Claim 13 (original): A method for continuously monitoring road surface friction, comprising the following steps:

- (a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate freely due to movement of said vehicle along said road surface;
- (b) applying an accelerative force to said test wheel to produce slippage thereof;
- (c) applying an electromagnetically controllable normal force to bias said test wheel against said road surface;
- (d) detecting a first instance of said slip condition of said test wheel on said road surface;
- (e) generating a slip detection signal at the time of said first instance of a slip condition, said slip detection signal representative of a value of said torque at the first instance of a slip condition; and
- (f) providing an indication of said slip detection signal.

Claim 14 (original): A method for continuously monitoring road surface friction, comprising the following steps:

- (a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate freely due to movement of said vehicle along said road surface;
- (b) applying a variable torque to said test wheel to produce slippage thereof;
- (c) applying an electromagnetically controllable normal force to bias said test wheel against said road surface;
- (d) detecting a first instance of slip condition of said test wheel on said road surface;

(e) generating a slip detection signal at the time of said first instance of a slip condition; and

(f) providing an indication of said slip detection signal.

Claim 15 (original): A method for repeatedly testing road surface conditions, comprising the following steps:

(a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate due to movement of said vehicle along said road surface;

(b) applying a fixed resistance to said test wheel to resist rotation thereof;

(c) applying an electromagnetically controllable normal force to bias said test wheel against said road surface;

(d) generating a slip detection signal indicative of a slip condition of said test wheel on said road surface; and

(e) providing an indication of said signal.

Claim 16 (original): A method for repeatedly testing road surface condition, comprising the following steps:

(a) positioning a test wheel, attached to a vehicle, for contact with a road surface so as to rotate due to movement of said vehicle along said road surface;

(b) applying a plurality of increasing, pre-determined resistances to said test wheel to resist rotation thereof;

(c) applying an electromagnetically controllable normal force to bias said test wheel against said road surface;

(d) generating a slip detection signal indicative of a slip condition of said test wheel on said road surface for each of said plurality of pre-determined resistances; and

(e) providing an indication of said signal for each of the said plurality of predetermined resistances.

Claims 17-22 (canceled)

Claim 23 (original): A device for applying a vertical force to a surface friction measuring test wheel comprising:

- (a) a test wheel moveable attached to a fixed point of support, a slip condition of said test wheel providing an indication of surface friction of a surface; and
- (b) electromagnetic force field applying means to bias said test wheel into contact with measured surface.

Claim 24 (original): A method for applying a vertical force to a surface friction measuring test wheel to measure a friction condition of said surface comprising the steps of:

- (a) providing a test wheel pivotally attached to fixed point of support; and
- (b) electromagnetically controllably biasing said test wheel into engagement with said surface to produce a controllable contact force between said test wheel and said surface.

Claim 25 (original): A method for continuously monitoring a surface friction, comprising the following steps:

- (a) positioning a test wheel for contact with said surface so as to rotate freely due to relative movement of said wheel along said surface;
- (b) applying an increasing resistance to said test wheel to resist rotation thereof;
- (c) applying an electromagnetically controllable normal force to bias said test wheel against said surface;

- (d) detecting a first instance of slip condition of said test wheel on said surface;
- (e) generating a signal representative of the braking torque required to produce said incipient slip condition; and
- (f) providing an indication of said slip detection signal.